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ABSTRACT

In reviewing the development of competency-based teacher education, emphasis was placed on philosophical and psychological rationales and on systems analysis. The philosophical rationale stresses the acquisition of knowledge in teacher education programs. Competency-based teacher education programs broaden this scope to include the application of this knowledge to actual learning situations. The psychological rationale stresses the manner in which individuals learn, as well as behavioral objectives. The concern for behavioral objectives provides the impetus to specify and measure specific learning outcomes. Systems analysis emphasizes the purpose, process, and components of teacher education. Competency-based teacher education programs also broaden this spectrum to include the necessity of evaluation in the program. Further research is needed. (Thirteen references are included in the paper.) (BRB)

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PHILOSOPHICAL AND PSYCHOLOGICAL RATIONALE FOR COMPETENCY-BASED TEACHER EDUCATION

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INTRODUCTION

The education of the American elementary school teacher is presently under attack from within and without the profession. For the past twenty years, every major professional organization concerned with education has issued a statement on the need for reform in the area of teacher education. There has been a plethora of conferences, recommendations, and guidelines on the question of how to best educate future teachers. Social critics outside of the profession have been quick to indicate that many of the problems of contemporary society as a whole could in part be traced to the teaching process. Silberman (1970) notes:

> . . . there is probably no aspect of contempory education on which there is greater unanemity of opinion than that teacher education needs a vast overhaul. Virtually everyone is dissatisfied with the current state of teacher education . . . (pp 413)

A traditional preservice teacher education program for elementary teachers consists of a series of courses in the professional area and a core program in the liberal arts. Little attention is directed toward the competencies one should posses to be an effective teacher. The assumption underlying the philosophy of a traditional teacher education program is that if a prospective teacher completes a specified sequence of courses he is competent to enter an elementary classroom and teach. The emphasis is on the completion of a certain number of prescribed courses regardless of whether or not the student acquires necessary skills, knowledge, and attitudes in a given area. Teacher education programs of this type tend to be temporal and structured around the needs and resources of the institution; few are built on the assumptions about the role

of a teacher in a changing society.

It is becoming obvious to teacher educators and to state certification offices that the traditional means of training teachers through a system of prescribed courses and credits will not insure a competent teacher. Individuals concerned with the training of teachers are seeking alternative models that reflect the mass of accumulated research so as to provide the prospective teacher with the necessary competencies to function effectively in the classroom.

In recent years there has been a movement away from the scope and sequence training of teachers towards a competency-based program of teacher education. This movement has come about as a result of new knowledge and understandings in three separate but interrelated areas. The first of these has come about due to a change in the basic philosophical constructs involved in teacher education. The publication of Teachers for the Real World under the sponsorship of the American Association of Colleges for Teacher Education, provided a new framework for the preparation of teachers. The Federal Government has become more active in it's support of preservice training of teachers. Through grants made available from the United States Office of Education, nine teacher training institutions were provided financial resourses to design new teacher education models that would represent radical departures from the traditional course-credit system. State certification offices have also become concerned with new approaches to certification that will insure effective teachers and provide an element of accountability to the communities they serve.

The second area that has brought about a change toward competency-based teacher education has come through the behavioral sciences. With an increased awareness of individual learning styles, teacher educators are beginning to

to examine the feasibility of designing programs that allow for individual differences. The behavioral objective movement has provided the impetus in attemping to specify and measure specific learning outcomes. Teacher educators following a competency-based approach to the training of prospective teachers anticipate that the basic psychological rationale used in the design of given programs could be carried over to the elementary classroom.

The third area that has had an effect on the competency-based movement has come from the field of systems analysis. The nature of systems analysis indicates a need to define the goals of a given program. Traditional programs are for the most part concerned with input variables such as time, space, personnel, and financial resourses. Such programs are usually not concerned nor do they attempt to define how the prospective teacher will be different as a a result of completing a given sequence. For this reason, traditional programs cannot provide feedback in the form of evaluation to bring about modification.

Philosophical Rationale

Historically, teacher education programs have centered upon knowledge as the primary critera in the preservice training of prospective teachers. Knowledge criteria is typically defined as a specific sequence of courses that a future teacher will complete to be considered competent to function effectively in the classroom. Such a sequence of courses will usually include a core of liberal arts, a social or historical foundations course in education, an exposure to educational psychology as applied to the teaching-learning process, and a series of methods courses.

The basic assumption underlying this approach to teacher education is that

knowledge, as measured by grades and transcript records, is a basis for predicting the success of a future teacher. Schalock (1970) indicates that knowledge critera based teacher education programs operates on the assumption that "knowledge of subject areas that relate to teaching is sufficient as a predictor of the ability to perform the tasks required of a teacher.(pp 5)" Smith (1969) correctly notes that there is no lack of theory or knowledge in the field of education. The problem of teacher education becomes on of "how to select the knowledge and train teachers to use it.(pp 47)" It is Smith's contention that "prospective teachers are now prepared in programs that provide little or no training in teaching skills. They are are taught apart from the realities that the teacher will meet and are considered preparatory to student teaching.(pp 48)" Theoretical knowledge is abstract and has little applicability to the real world. If theorectical knowledge is to become meaningful and relivant to the teaching profession, it must be adapted to suit the unique reality that it meets.

During the past few years, some teacher training institutions, expecially in the Master of Arts in Teaching programs, have attempted to move away from the knowledge critera based program. They have instead gone over to the other extreme, i.e., the total elimination of all theoretical knowledge and teacher training becoming an extended intern period. The assumption of such an experience-based teacher education program is that first hand experience is the best kind of training. Smith (1969) criticizes the intern approach because the "trainee learns by trial and error and a miniumum of feedback. The situations that arise in his teaching are fleeting in tenure and can be discussed only in retrospect. (pp 70)"

What a competency-based program provides is a synthesis of the knowledge

critera and experience-based programs. It is a bridge between the theoretical and the real world. Cooper (1967) indicates that "what beginning teachers need is more help in translating what we know about learning to actual teaching be havior. (pp 2)"

For example, a prospective teacher could be sitting in an elementary science methods course listening to the professor lecture on the work of Jean Piaget and his influence on contempory elementary science curricula. Unless this knowledge can be translated into teaching behavior that can be used in the classroom, it will remain nothing more than a theoretical consiseration or worse yet possible test items for a final examination.

The knowledge of the Piagetian theory should be a prerequisite to a specific behavior that can be observed and measured. The performing of specific tasks by using the Piagetian theory to provide learning opportunities in elementary science that the reflect the intellectual development of children bridges the knowledge critera with a given classroom reality. The focus of a performance based teacher education program becomes one of what a prospective teacher <u>does</u> not what he <u>knows</u>. However, in order for the teacher to exhibit a given behavior, he should posses a theoretical foundation.

The classroom teacher is a problem solver. One finds great difficulty solving problems of human growth and potential on a strictly trial and error basis. In a competency-based program, the knowledge of how to solve classroom problems becomes a prerequiste to a behavior insteac of the final product.

Smith (1969) notes that:

> . . . the focus of study in a training program is the trainee's own behavior, not the content of the course. This is in sharp contrast with the theoretical component where is it the situation that is to be examined and understood. In training, it is the trainees performance that will be observed, analyzed, and modified.(pp 71)

Competency-based teacher education focuses on the integration of knowledge and performance. Specific competencies are made known to the trainee and he is put into a situation where he can perform the skill. His performance is analyzed and evaluated on a predetermined critera. After the performance the trainer will suggest possible changes. Competency-based programs represent radical departures from the knowledge based or experience based teacher education sequences.

Smith (1969) indicates:

> An approach such as this requires a sharp break with the view that the inherent logic and integrity of courses in education should not be violated and that the student will profit mainly from systematically studying their content. This view relies heavily on transfer of learning, for it depends on the application of what is read or heard to the different real situation with which the teacher must deal. The focus of a teacher's theoretical study in a situational approach is not the content of a course but the situations he will meet and the tasks he will perform.(pp 48)

Psychological Rationale

In the area of the behavioral sciences, there are presently two foci which have a direct influence on competency-based teacher education. The first of these is a distinct change that has come about in educational psychology in

respect to how individuals learn and the second is that of the behavioral objective movement.

There is enough evidence to support the basic thesis that learning styles are a unique and individualistic phenomenon. Stephens (1967) cites numerous reviews and empirical studies that indicate no significant differences when one method of instruction is compared to another. Nochman and Opchinsky (1958) note that "different teaching procedures produce little or no difference in the amount of knowledge gained by the student.(pp245)" Television instruction verses traditional teaching, team teaching in contrast to the self-contained classroom, large classes as opposed to small ones, and lecture techniques compared to discussion methods; the results are always the same, no significant difference.

Teachers tend to view their classes as a single mind; not as individuals. Curricula, syllabi, and lesson plans all assume identicle life experiences, the same intellegence levels, and similar perceptions of reality. Few teachers take into consideration that each individual in a learning situation brings to that situation a unique set of past experiences, and highly individualistic conceptualization of the environment. Siegel (1967) symmerizes this position by stating that "to be most effective, instruction must be tailored to the needs, capabilities, and histories of the individual learner. (pp 320)"

After a review of a number of contemporary viewpoints on learning, Siegel (1967) believes that the process of learning is totally idosyncratic. He concludes that "classes do not learn, students learn.(pp320)" Psychologists have been unable to arrive at a unified theory of learning. No single theory can account for all the discrepancies that are found in a specific learning style. Siegel (1967) goes on to note that instruction can best be viewed as an "inter-

action between 'givens' brought to the instructional setting by the learner and the circumstances (including other persons) comprising that setting.(pp 327)"

The classical idea of trying to find a unified theory of learning, is emerging as a series of generalizations. Educational psychologists have a general agreement to view learning as a change or modification of behavior. The question has now become how to facilitate this change. On an initial reading of a specific approach it would seem that there are a number of theories on how this could be accomplished, however on closer examination it is the language in many cases that is different and not the implicit ideas. A number of contempory investigators have almost identicle elements in their theories. All seem to emphasize the need for higher order processes, i.e., the need to focus on the skills of conceptualization and synthesis. There appears to be a movement toward a wholistic view of knowledge instead of attempting to arbitrarily divide reality into various domains. Another common denominator found in contemporary viewpoints on leaning is the emphasis on the active nature of the process rather than the passive. A final common feature is the view that learning is idiosyncratic in nature.

Whatever theoretical stance one may take in respect to a given position on learning, the time has come for investigatiors "to stop inquiring whether one mode of presentation is as good as another. (Siegel and Siegel, 1967, pp 261)" For teacher educators such conclusions have far reaching significance. Competency-based teacher education makes use of such knowledge by allowing the individual to use the particular learning style that is coincident to his needs. Those concerned with the training of teachers cannot continue to lecture preservice teachers on discovery learning and individualization of instruction. If transfer from the preservice experience to the classroom is ever going to take place, it is im-

peritive that the program allow for individual differences.

In addition to providing a program that allows for individual differences, teacher educators are beginning to focus on specific goals and objectives. For this they have turned to the ideas of curriculum theorists that see the need to express learning outcomes in behavioral terms.

As a result of the work of Tyler (1950), Popham (1969), and Gagne' (1965), there has been a movement toward attempting to describe what students will be able to do as a result of instruction. They argue that if learning is to be defined as a change in behavior, a teacher should be able to specify the desired change and determine if indeed the learner has changed his behavior.

In the simplist terms, a behavioral objective specifies how the learner will be different at the end of an episode of instruction. Once a teacher can specify a given behavioral objective, he has a powerful tool determine whether or not the student has been successful in achieving the specified objective. No longer must the teacher be bound to a paper and pencil test for evaluation. One can set up situations and observe the presence or absence of the specific behaviors of the learners.

Competency-based teacher education makes use of behavioral objectives to communicate to the prospective teacher exactly what is expected of him. How often are students involved in determing the goals toward which they are working and have to wait for an examination to "know" what the teacher wants? The use of behavioral objectives in competency-based teacher education programs publically indicate what the learner will be like as a result of instruction. By using behavioral objectives, evaluation becomes an integral part of the teacher's growth; not simply a final examination that tests the acquisition of knowledge.

Systems Analysis

Teacher education institutions have traditionally prepared teachers based on the dictates of state certification offices. The question of what kind of teacher does a given institution want, or more important what kind of teacher does the society need, is in reality nothing more than structuring programs around a specified sequence of courses. Certification requirements are slow to change and we live in a rapidly changing society. Traditional programs have generally been unresponsive to these changes. Cooper and Weber (1971) note that"the rapid societal changes we are now experiencing require teacher education institutions to be far more responsive than ever before.(pp 6)"

It has become obvious from the research related to teacher effectiveness that good teaching is not so much a function of what a teacher knows but how he can use the knowledge. An outgrowth of such a perspective has caused teacher educators to think about the purposes or goals of a given program. Questions of what kind of teachers are needed, what processes or means will be necessary to achieve the stated goals, and what organizational components have to be designed to bring about the desired outcomes?

The three elements of purpose, process, and components has brought teacher education into the realm of systems theory. Once teacher educators begin viewing the training of teachers in terms of desired products, it becomes necessary to examine that product as part of a total system. It is impossible to isolate the goals from the processes from the components.

Copper and Weber (1971) define a system as a"collection of interrelated and interacting components which work in an integrated fachion to attain

predetermined purposes.(pp 8)" LeBaron (1969) provides a broader perspective by indicating a system "as an orderly approach for first defining and describing a universe of interest (and the significant factors and their interrelationships within that universe); and second, determining what changes in that universe will cause a desired effect. (pp 10)"

Both definitions have as a commonality the concept of a disired outcome or product. The "products" of a given system are the teachers who graduate from a teacher education program. Cooper and Weber (1971) believe that "the primary measure of the program's success is whether or not these teachers posess the knowledge, skills, and attitudes which the program had as its goals. (pp 4)"

It is for this reason that evaluation becomes an absolute necessity. The information derived from the evaluation is used to make necessary modifications in the goals, processes,or components of the program. By using a systems approach to teacher education, a given program becomes responsive to the changes and needs of the society.

Cooper and Weber (1971) state that "in a systems approach the components of a program must be derived from it objectives; they are designed specifically to facilitate the achievement of the program's objectives. (pp 7)" It is for this reason that objectives cannot be stated vaguely or imprecisely since the design of the processes and components is dependent upon the objectives of the program. The use of behavioral and expressive objectives makes it possible to determine whether the processes and components of a given program are accomplishing what they were designed to accomplish.

Conclusions

Competency-based teacher education is not to be viewed as the final panacea for the education of future of teachers. The effectiveness of any teacher education program ultimately depends on how the teachers that come through a given program effect student learning. Too little is known about the effectiveness of teacher preparation programs. The relationship between teacher behaviors and consequent learning by students has not been throughly investigated.

The major thrust in teacher education research must be toward evaluating the outcomes of instructional programs in terms of of teacher performance in the classroom. Competency-based teacher education is the second in a three critera approach suggested by Schalock (1970). The first critera are those teacher education programs based on the acquisition of knowledge. Knowledge critera programs are predicated on the assumption that knowledge of subject areas that relate to teaching is sufficient as a predictor of the ability to perform tasks required of a teacher. The second critera is that of performance. In comptency-based programs, specific teaching behaviors are identified and prospective teachers are expected to demonstrate these behaviors. Competency-based teacher education bridges the gap of knowing and doing. The third criteria, which is yet to be realized, is a product critera program. The growth of pupils the teacher has taught becomes the evidence for the effectiveness of such a program.

Perhaps a quotation from Rosenshine and Furst (1971) reflects the authors point of view regarding the role of educational research and the training of future teachers:

. . . the beginning of wisdom in the study and improvement of teaching behavior is the confession of our lack of knowledge that can be applied with confidence to a teacher education program. Educational researchers have not provided those who train teachers with a repertoire of teaching skills which indicate to a teacher that if he increases behavior X and/or decreases behavior Y there will be a concomitant change in the cognitive or affective achievement of his students. It is time to stop touting structural panaceas and to begin developing the research which may produce the knowledge. (pp 40)

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